

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-57 are presently active in this case. The present Amendment amends Claims 51-54 and adds Claims 55-57.

The outstanding Office Action rejected Claims 1-4, 6, 8-22, 24-27, 29, and 43-50 under 35 U.S.C. § 103(a) as being unpatentable over Graham (U.S. Patent No. 3,344,961) in view of Smith (U.S. Patent No. 6,296,155).

First, Applicants wish to thank Examiner Derakshani for the courtesy of a personal interview granted to Applicants' representatives on January 17, 2007, at which time the outstanding issues in this case were discussed as substantially summarized below and also on the Interview Summary provided by Examiner Derakshani.

Applicants respectfully request that Claims 51-54 be considered in the next Office Action. Claims 51-54 were newly added in the Amendment filed on May 26, 2006. However, the outstanding Office Action does not explain how these claims are met by the prior art of record so that Applicants cannot appropriately address the rejection of these claims.

In order to vary the scope of protection recited in the claims, new Claims 55-57 are added. New Claims 55-57 find non-limiting support in the disclosures as originally filed, for example on page 9, paragraph 42 with corresponding Figure 3B. Therefore, the changes to the claims are not believed to raise a question of new matter.

In response to the rejection of the claims under 35 U.S.C. §103(a), Applicants respectfully requests reconsideration of this rejection and traverse the rejection, as discussed next.

I. THE PROPOSED COMBINATION OF THE GRAHAM AND SMITH PATENTS FAILS TO TEACH OR SUGGEST ALL OF THE CLAIMED LIMITATIONS OF THE PRESENT INVENTION

Briefly recapitulating, Applicants' invention, as recited in Claim 1, relates to a tilting valve for dispensing a product from a pressurized container. The tilting valve includes an opening/closing element with at least two inlet apertures. The opening/closing element is capable, in response to a force transmitted to the opening/closing element *laterally* to a longitudinal axis of the tilting valve, of moving from a *closed* position to a *first open* position in which the product under pressure is dispensed at a first flow rate. The opening/closing element is also capable, in response to a force transmitted to the opening/closing element *parallel* to the longitudinal axis, of moving from the closed position to a second open position in which the product is dispensed at a second flow rate different from the first flow rate.

Applicants' invention improves upon conventional valves because, not only does it provide variable flow rates, it does so *by differentiating between the forces (lateral vs. parallel) responsible for the different flow rates*. The claimed valve thus leads to improved control for the user because the user can easily differentiate between the available flow rates by using different movements (tilting vs. depressing) to actuate the valve at the different rates.¹ As explained in Applicants' specification, in conventional valves with variable-flow rates, the flow rates are obtained by transmitting a force to the valve *in the same direction*, in particular by moving the valve stem downward.²

Turning now to the applied prior art, the Graham patent discloses an aerosol dispensing device. The Graham patent first describes a known spraying device (Fig. 1) that incorporates a spring 27 to bias a flange 19 against a sealing disc 10.³ The innovation described in the Graham patent relates to the replacement of the spring 27 by a pin 132 (Figs.

¹ See Applicant's specification at page 4, paragraph 19.

² See Applicant's specification at page 3, paragraph 12.

³ The Graham patent, from column 3, line 48 to column 4, line 37.

2-8).⁴ The outstanding Office Action relies on the description of the spraying device with the spring.⁵ In this device, the flange 19 defines a single metering hole 19, which connects a trough-like space 20 bounded by the flange 19 with the interior of a discharge tube 18.⁶ As acknowledged by the outstanding Office Action,⁷ the Graham patent fails to teach first and second inlet apertures. Thus, the Graham patent fails to teach the claimed opening/closing element that is capable of moving from a closed position to two open positions with different flow rates in response to two different forces, one transmitted laterally and one transmitted parallel to the longitudinal axis of the valve.

The outstanding Office Action rejects Applicants' claims based on the proposition that the Smith patent discloses "first 50 and second 52 inlet apertures so a user can select different flow rates,"⁸ and that it would have been obvious to modify "the Graham tilt valve with first and second inlet apertures as taught by Smith so a user can select different flow rates."⁹ The Smith patent, which is discussed in Applicants' specification,¹⁰ discloses an aerosol dispensing apparatus with a valve body 22 that includes a stem 26, a biasing spring 28, and a gasket 30.¹¹ A portion of the stem 26 protrudes through a mounting cup 12 (which is attached to an aerosol canister) and supports an actuator button 24.¹² The stem 26 has at least one first radial orifice 50 and at least one second radial orifice 52.¹³ In the closed position shown in the Smith patent's Fig. 2, the first radial orifice is blocked from flow by a seal formed between a gasket 30 and an annular sealing rib 70, and the second radial orifice 52 is directly blocked by engagement with gasket 30. The user must initially *depress* the

⁴ The Graham patent, column 1, lines 33-42.

⁵ See outstanding Office Action at page 2 referring to Graham's column 4, lines 15-33.

⁶ The Graham patent, column 3, lines 73-75.

⁷ See outstanding Office Action at page 2, third paragraph.

⁸ See outstanding Office Action at page 2, third paragraph.

⁹ See outstanding Office Action at page 2, third paragraph.

¹⁰ See Applicant's specification at page 3, paragraph 12.

¹¹ The Smith patent, column 4, lines 46-49.

¹² The Smith patent, column 4, lines 59-62 and column 4, lines 20-25.

¹³ The Smith patent, column 5, lines 4-5 and column 5, lines 17-18.

actuator button 24, causing the valve stem 26 to compress the biasing spring 28 and move the annular sealing rib 70 out of abutting engagement with the gasket 30, in order to produce a first flow.¹⁴ An elastomer compressible member 78 (or a compressible spherical ball 80) is incorporated within the actuator valve to provide additional depression resistance and to indicate to the operator a transition from the first low/fine product dispensing spray position to the second high/coarse dispensing position.¹⁵ The user must further apply increased *downward depression* force on the actuator button 24 in order to compress the compressible member in order to move the second radial orifice 52 below the gasket 30 and produce a second flow rate.¹⁶ Thus, in the Smith device, the two flow rates are obtained *by transmitting a force to the valve in the same direction*, i.e., by moving the stem downward to a greater or lesser degree.

Reading the Smith patent, a person of ordinary skill in the art at the time of the invention would not find any teaching or suggestion therein to differentiate between the forces (e.g., lateral vs. parallel) responsible for the different flow rates. The Smith patent does not teach or suggest flow rate differentiation by using different movements (tilting vs. depressing) to actuate the valve at the different rates. To the contrary, the object of the Smith patent is to achieve two product flow rates “by merely applying downward pressured [sic] to the actuator button.”¹⁷ Therefore, even if the combination of the Graham and Smith patents is assumed to be proper, *the combination fails* to teach every element of the claimed invention. Specifically, the combination fails to teach or suggest the claimed valve capable, in response to a force transmitted to the opening/closing element *laterally* to a longitudinal axis of the tilting valve, of moving from a *closed* position to a *first open* position in which the product under pressure is dispensed at a first flow rate, and in response to a force transmitted

¹⁴ The Smith patent, column 6, lines 17-29.

¹⁵ The Smith patent, column 5, line 66 to column 6, line 5.

¹⁶ The Smith patent, column 6, lines 66 to column 7 line 15.

¹⁷ The Smith patent, column 1, lines 32-40.

to the opening/closing element *parallel* to the longitudinal axis, of moving from the closed position to a second open position in which the product is dispensed at a second flow rate different from the first flow rate. Accordingly, Applicants respectfully traverse, and request reconsideration of, this rejection based on these patents.¹⁸

II. THE DIFFERENCES BETWEEN THE SUBJECT MATTER OF THE PRESENT INVENTION AND THE CITED ART WOULD NOT HAVE BEEN OBVIOUS AT THE TIME THE INVENTION WAS MADE TO A PERSON HAVING ORDINARY SKILL IN THE ART

During the interview, the motivation to combine Graham and Smith was discussed. Applicants respectfully further traverse the obviousness rejection based on the Graham and Smith patents because there is insufficient evidence for a motivation to modify the Graham tilt valve by incorporating Smith's first and second inlet apertures, for the following reasons.

A. The Record fails to provide the required evidence that one of ordinary skill in the art at the time of the invention would be motivated to combine the tilt valve of the Graham patent with the *selectable* flow rate valve of Smith.

The outstanding Office Action states that the proposed modification would have been obvious "so a user can select different flow rates."¹⁹ The record, however, fails to provide the required evidence of a motivation for a person of ordinary skill in the art to perform such modification. While the Smith patent may provide a reason for using first and second inlet apertures in a valve assembly having a primary product dispensing rate and a secondary product dispensing rate that are achieved *by only applying downward pressure* to an actuator button, the Smith patent fails to suggest why a person of ordinary skill in the art would be motivated to incorporate such a feature in a *tilt valve* such as the one disclosed in the Graham patent. Applicants note that the Graham patent fails to discuss multiple flow rates and the ability to differentiate those flow rates. The Smith patent uses first and second apertures *in*

¹⁸ See MPEP 2142 stating, as one of the three "basic criteria [that] must be met" in order to establish a *prima facie* case of obviousness, that "the prior art reference (or references when combined) must teach or suggest all the claim limitations," (emphasis added). See also MPEP 2143.03: "All words in a claim must be considered in judging the patentability of that claim against the prior art."

¹⁹ See outstanding Office Action at page 2, lines 7-9.

combination with a compressible spherical ball or an elastomer compressible member in order to achieve two different flow rates. The Smith patent, however, does not suggest that first and second apertures would work, *on their own*, in a tilt valve, much less “so a user can select different flow rates” in such a tilt valve. The Smith patent does not state that the tilt valve described in Graham needs “different flow rates.”

In addition, the Smith patent states that its structure already achieves the goal of providing an aerosol valve which has a first low/fine flow dispensing rate and a second high/course dispensing rate with both product dispensing rates being achieved by merely applying downward pressure to the actuator button.²⁰ The Smith patent does not suggest that further improvement is desired, nor that another feature should be added to “so a user can select different flow rates.” In particular, the Smith patent does not suggest to add first and second apertures to a *tilt valve*, such as the one disclosed in the Graham patent.

Furthermore, the Smith patent teaches away from the present invention. The Smith patent is directed to flow rate differentiation “without requiring any operator manipulation or intervention to alter the product dispensing flow [of] the valve.”²¹ The Smith patent achieves this objective by including an elastic member in the valve body that enables an operator to instantly sense that *further depression* of the valve stem will alter the product dispensing flow rates.²² Thus, by teaching a valve that enables users to choose a flow rate based on the downward pressure on the valve stem without requiring any additional user manipulation, the Smith patent teaches away from differentiating between the type of manipulation (e.g., lateral vs. parallel) responsible for the different flow rates.

The Graham and Smith patents, therefore, do not provide the motivation to perform the proposed modification of the Graham device. In other words, an attempt to bring in the

²⁰ See the Smith patent, at column 1, lines 32-36 (describing the goal of the Smith patent), column 6, line 55 to column 7, line 5 (describing how this goal is achieved in a first embodiment), and column 8, lines 1-30 (describing how this goal is achieved in a second embodiment).

²¹ The Smith patent, column 1, lines 54-56.

²² The Smith patent, column 1, lines 43-45.

isolated teaching of Smith's first and second apertures into the Graham tilt valve would amount to improperly picking and choosing features from different references without regard to the teachings of the references as a whole.²³

- B. Even if the combination of Smith and Graham is assumed to be proper, any reasonable combination of these two references would include a compressible member that is separate from a return spring, as presently recited in new dependent Claim 57.**

The Smith patent is directed to *flow rate differentiation* "without requiring any operator manipulation or intervention to alter the product dispensing flow [of] the valve."²⁴ The Smith patent achieves this objective by *including a compressible member* in the valve body that enables an operator to instantly sense that *further depression* of the valve stem will alter the product dispensing flow rates.²⁵ The outstanding Office Action asserts that the motivation to combine the Graham and Smith patents "so a user can select different flow rates" can be found in the Abstract of the Smith patent. In the Abstract, the Smith patent describes that a primary low/fine product dispensing flow rate is achieved upon initial vertical depression of the valve stem while a high/coarse product dispensing flow rate is achieved upon maximum vertical depression of the valve stem. The Abstract of the Smith patent also describes that an internal compressible member is located within the valve assembly to provide a detectable indication, to an operator of the valve assembly, that further depression of the valve stem will increase the product flow dispensing rate from the primary low/fine dispensing rate to the secondary high/coarse dispensing rate. Thus, upon review of the Smith patent, a person of ordinary skill in the art at the time of the invention who was interested in achieving user selectable flow rates would recognize that an internal

²³ See In re Ehrreich 590 F2d 902, 200 USPQ 504 (CCPA, 1979) (stating that patentability must be addressed "in terms of what would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the sum of all the relevant teachings in the art, not in view of first one and then another of the isolated teachings in the art," and that one "must consider the entirety of the disclosure made by the references, and avoid combining them indiscriminately.")

²⁴ The Smith patent, column 1, lines 54-56.

²⁵ The Smith patent, column 1, lines 43-45.

compressible member is a *necessary* element of the flow rate differentiation described in the Smith patent. As a user *cannot select* different flow rates without being able to *differentiate* between different flow rates, and as the internal compressible member described in the Smith patent performs the flow rate differentiation function, the internal compressible member *is an essential element* for enabling a user to select different flow rates in the valve described in the Smith patent. Therefore, even if the combination of Graham and Smith is assumed to be proper “so a user can select different flow rates,” that combination would include an internal compressible member to enable a user to differentiate between flow rates in order to select different flow rates.

New dependent Claim 57 recites, *inter alia*, that the valve body does not include a compressible member, separate from a return spring, configured to indicate different flow rates. New dependent Claim 57 includes the limitations of Claim 1. As discussed above, the valve described in Claim 1 provides variable flow rates by differentiating between the forces (lateral vs. parallel) responsible for the different flow rates. Thus, new dependent Claim 57, in combination with independent Claim 1, patentably defines over any reasonable combination of the Graham and Smith patents.

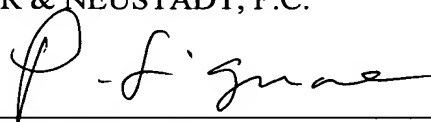
CONCLUSION

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-57 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

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